In the Claims:

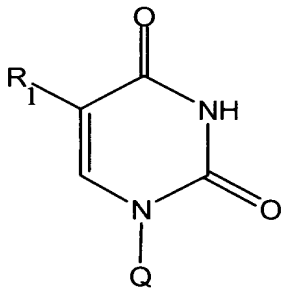
Please cancel claims 2 to 55, without prejudice or disclaimer.

Please add the following new claims:

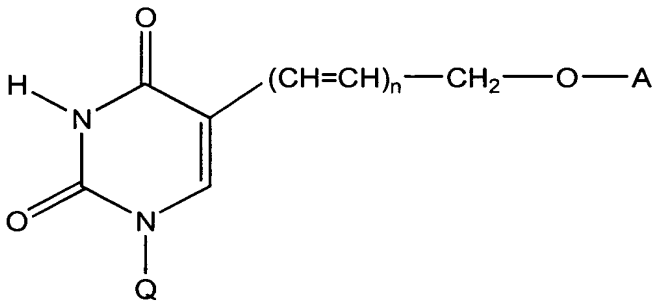
56. (New) A method for inhibiting the proliferation of a hyperproliferative cell, comprising contacting the cell with a phosphoryl or phorphoramidate prodrug that is selectively converted to a toxin in the cell by an endogenous, intracellular enzyme.

57. (New) A method for treating a pathology characterized by hyperproliferative cells in a subject comprising administering to the subject a phosphoryl or phosphoramidate prodrug that is converted to a toxin in a hyperproliferative cell by an intracellular enzyme that is endogenously overexpressed or over-accumulated in the cell.

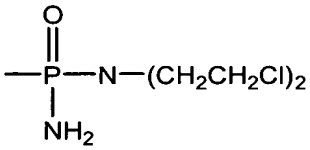
58. (New) A method for inhibiting the proliferation of a hyperproliferative cell comprising contacting the cell with an L- or D- isomer of the formula:



wherein R_1 is an electrophilic leaving group; or a compound of the formula:

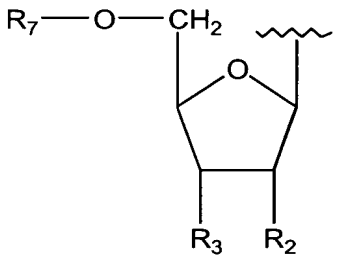


wherein n is an integer from 1 to 10; wherein A is a phosphoryl or phosphoramidyl moiety, or a substituent of the formula:



wherein Q is selected from the group consisting of a 5' substituted masked phosphoryl, a phosphoryl or phosphoramidyl moiety selected from the group consisting of a sugar substituent, a thio-sugar substituent, a carbasugar substituent, and a seco-sugar sustituent.

59. (New) The method of claim 58, wherein Q has the formula:



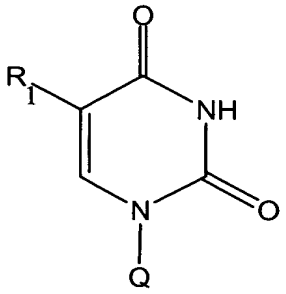
wherein R_7 is selected from the group consisting of masked phosphoryl moiety, phosphoramidyl moiety, and wherein R_2 and R_3 are the same or different and are independently -H or -OH.

60. (New) The method of claim 58, wherein R_1 is a halogen.

61. (New) The method of claim 58, wherein R_1 is an alkenyl group of the formula $(-CH=CH)_n-R_4$, wherein n is an integer from 1 to 10, and R_4 is a substituent selected from the group consisting of H, a halogen, alkyl, alkene, alkyne, hydroxy, -O-alkyl, -O-aryl, O-heteroaryl, -S-alkyl, -S-aryl, -S-heteroaryl, $-NH_2$, -NH-alkyl, $-N(alkyl)_2$, -NHCHO, a cyanide, cyanate, thiocyanate cyanide, thiocyanate halovinyl substituent, a halomercuric substituent, -

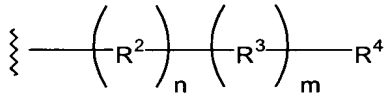
NHOH, -NHO-alkyl, and $NHNH_2$.

62. (New) A compound of the formula:



wherein:

R^1 is a substituent of the formula:



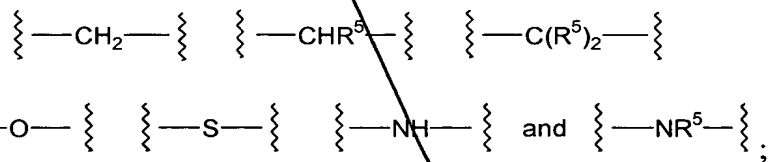
R^2 is a divalent moiety wherein n is from 1 to 10 and is selected from the group consisting of:

an unsaturated hydrocarbyl group;

an aromatic hydrocarbyl group consisting of one or more unsaturated hydrocarbyl groups; and,

a heteroaromatic group consisting of one or more unsaturated hydrocarbyl groups;

R^3 is selected from the group consisting of:



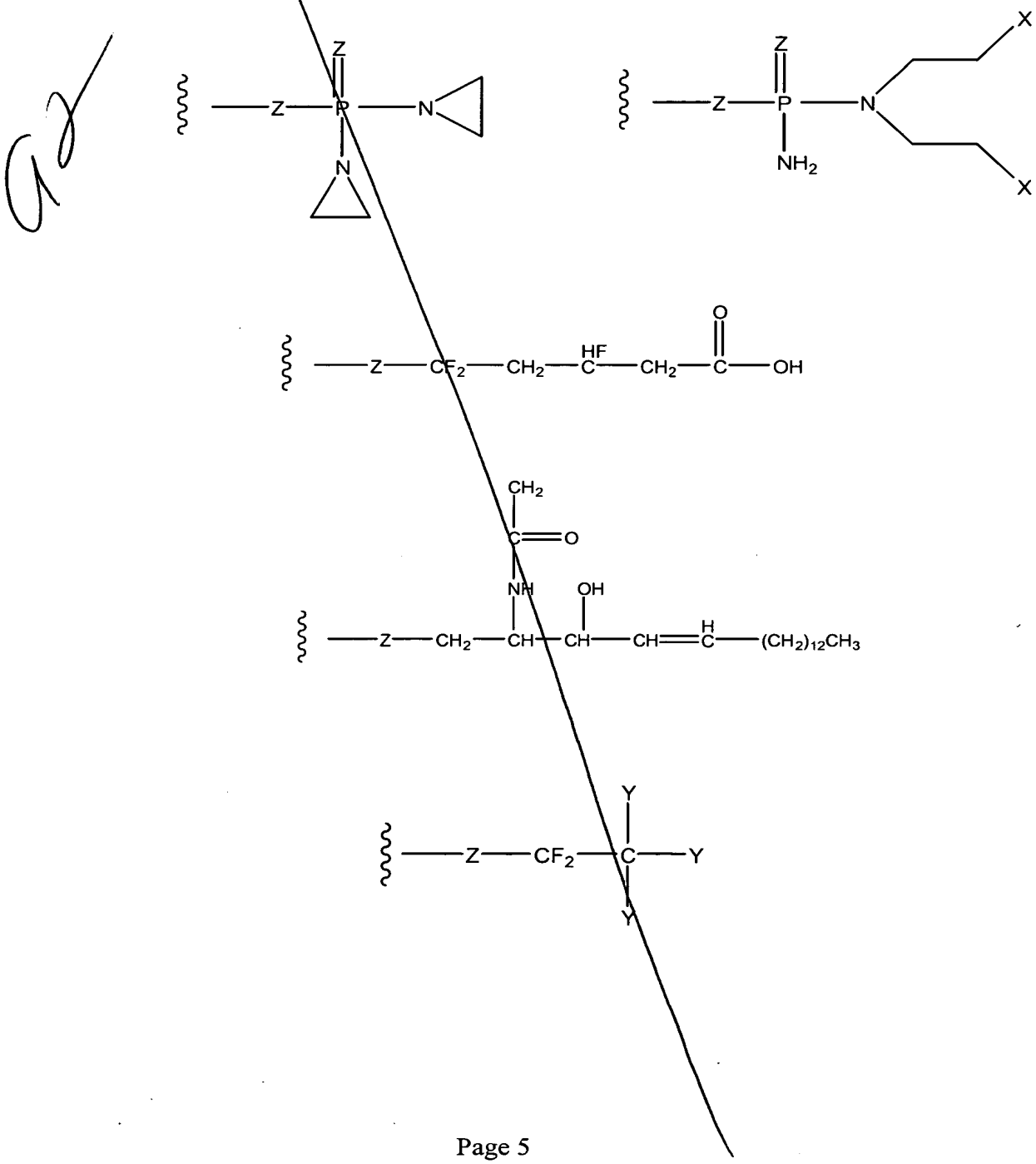
R^5 may be the same or different and is independently a linear or branched alkyl

group having from 1 to 10 carbon atoms, or a cycloalkyl group having from 3 to 10 carbon atoms;

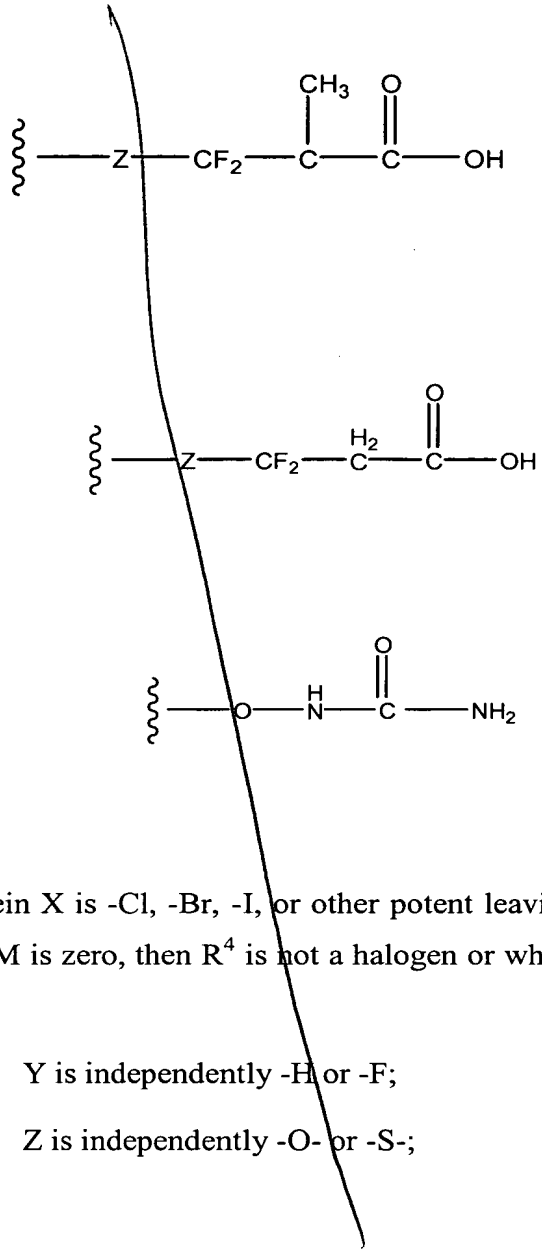
n is an integer from 1 to 10;

m is 0 or 1;

R^4 is a toxophore moiety selected from the group consisting of:



Application Serial No. To be Assigned
Attorney's Docket No. 126745-200402

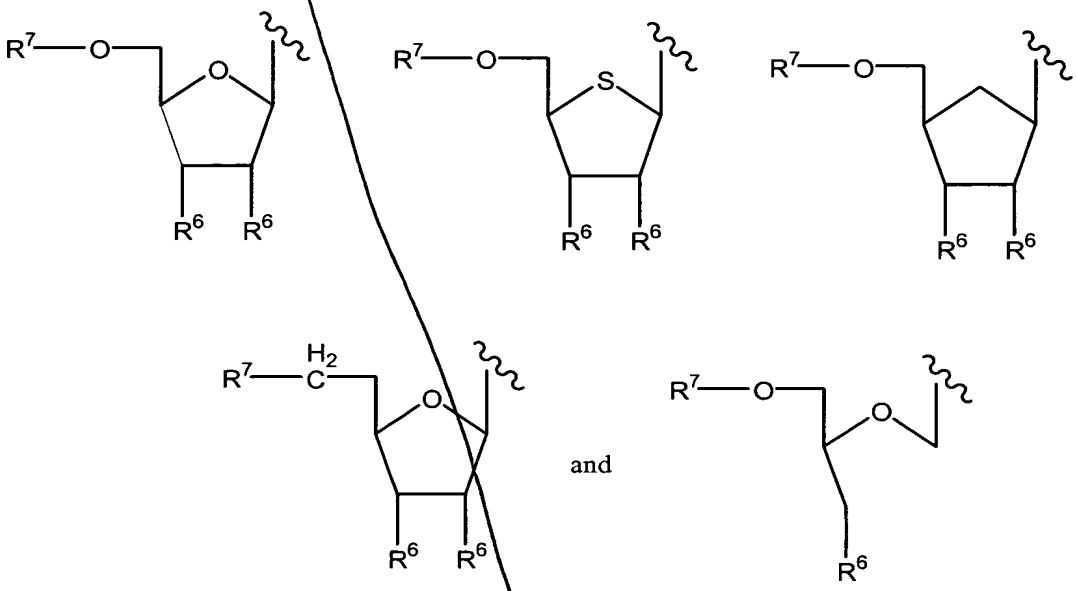


wherein X is -Cl, -Br, -I, or other potent leaving group, with the proviso that when R^7 is -H, and M is zero, then R^4 is not a halogen or when m is zero and n is zero, then R^4 is not a halogen;

Y is independently -H or -F;

Z is independently -O- or -S-;

Q is selected from the group consisting of:



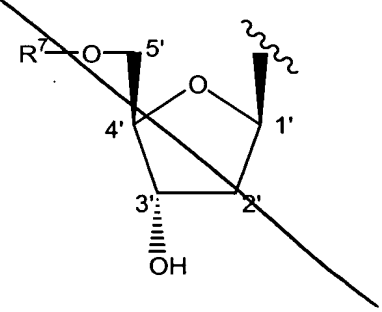
and

R^6 is independently -H, -OH, $-OC(=O)CH_3$, or -O-Rg wherein Rg is a hydroxyl protecting group other than acetyl; and,

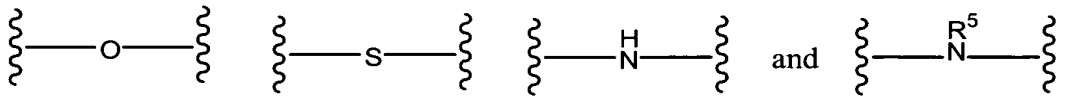
R^7 is hydrogen, a masked phosphate group, or a phosphoramidate group;

and wherein said compound may be in any enantiomeric, diasteriomeric, or stereoisomeric form, consisting of a D-form, L-form, -anomeric form, and -anomeric form.

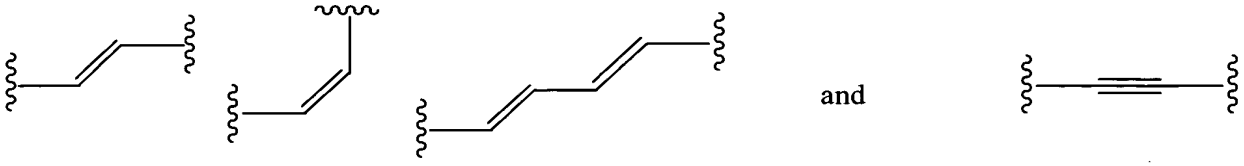
63. (New) A compound according to claim 62, wherein Q is:



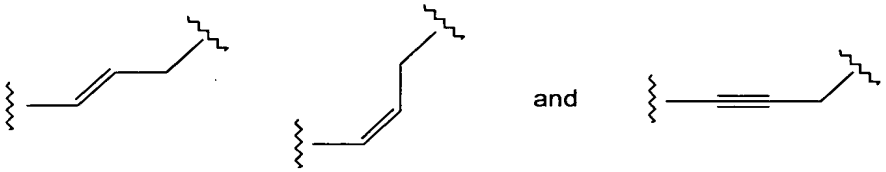
64. (New) A compound of claim 62, wherein R^3 is a divalent spacer moiety selected from the group consisting of:



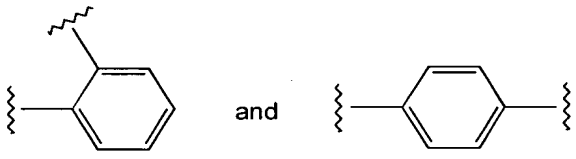
65. (New) A compound of claim 62, wherein R^2 is an unsaturated hydrocarbyl group selected from the group consisting of:



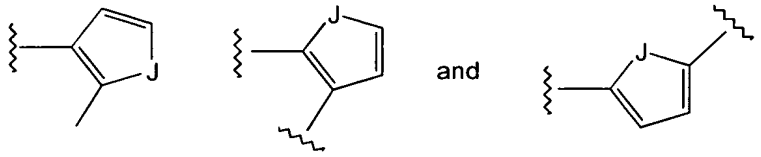
66. (New) A compound of claim 62, wherein R^2 and R^3, taken together form a structure selected from the group consisting of:



67. (New) A compound of claim 62, wherein R^2 is an aromatic hydrocarbyl group selected from the group consisting of:

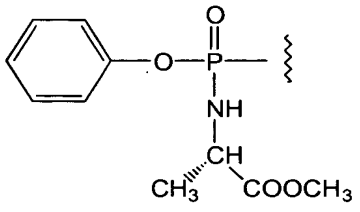


68. (New) A compound of claim 62, wherein R^2 is a heteroaromatic group selected from the group consisting of:

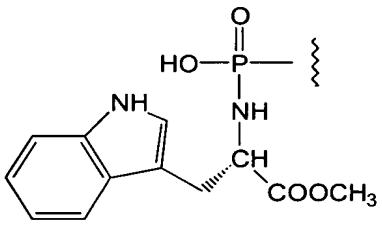


wherein J is -O-, -S-, -Se-, -NH-, or -NR^{ALK}-, wherein R^{ALK} is a linear or branched alkyl having 1 to 10 carbon atoms or a cycloalkyl group having 3 to 10 carbon atoms.

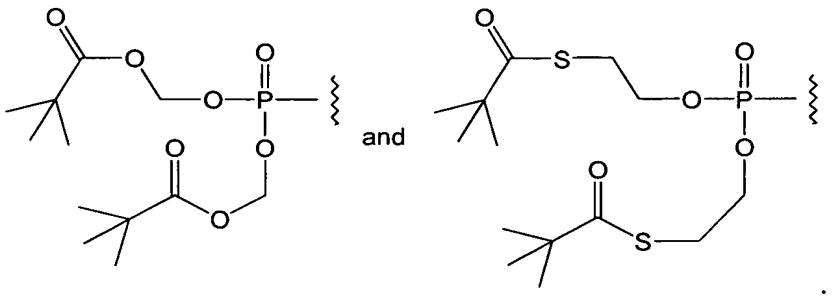
69. (New) A compound of claim 62, wherein R^7 is selected from the group consisting of:



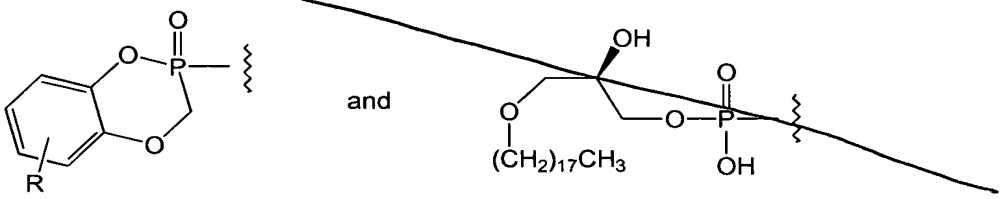
70. (New) A compound of claim 62, wherein R^7 is selected from the group consisting of:



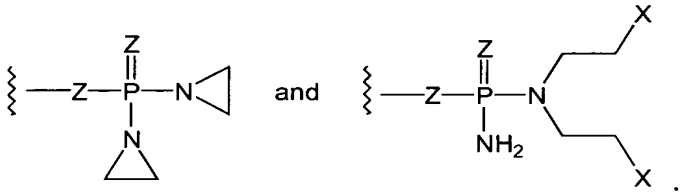
71. A compound of claim 62, wherein R^7 is selected from the group consisting of:



72. (New) A compound of claim 62, wherein R^7 is selected from the group consisting of:

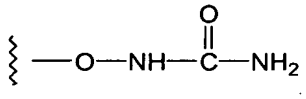


73. A compound of claim 62, wherein R^4 is selected from the group consisting of:

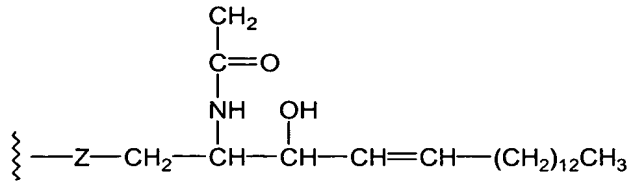


74. A compound of claim 62, wherein R^4 is selected from the group consisting of:

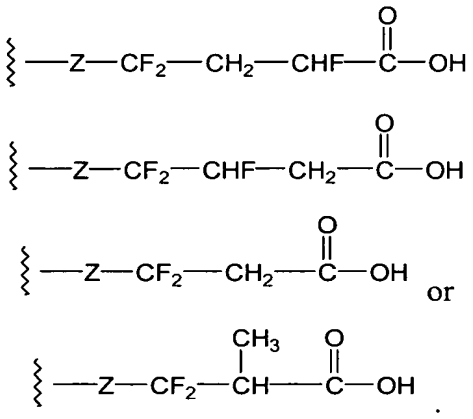
75. (New) A compound of claim 62, wherein R^4 is:



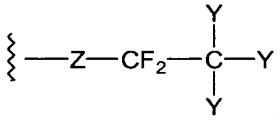
76. (New) A compound of claim 62, wherein R^4 is:



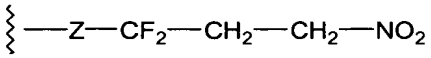
77. (New) A compound of claim 62, wherein R^4 is:



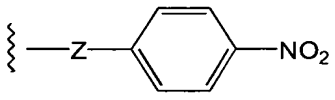
78. (New) A compound of claim 62, wherein R^4 is:



79. (New) A compound of claim 62, wherein R^4 is:



80. (New) A compound of claim 62, wherein R^4 is:



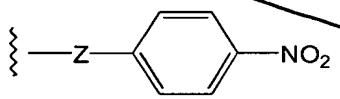
81. (New) A method for inhibiting the proliferation of a hyperproliferative cell, comprising contacting the cell with an effective amount of a compound of claim 62.

82. (New) The method of claim 81, wherein the hyperproliferative cell is characterized by the endogenous overexpression of an intracellular enzyme.

83. (New) The method of claim 82, wherein the enzyme is thymidylate synthase.

84. (New) A method for treating a pathology characterized by hyperproliferative cells in a subject comprising administering to the subject a compound of claim 62.

85. (New) A method for screening for a therapeutic agent, comprising contacting a target cell with a compound of claim 62, wherein R^4 is:



86. (New) A method of inhibiting the proliferation of a pathological cell that contains an intracellular target enzyme, comprising:

(a) contacting the cell with a compound of claim 62; and

(b) allowing the cell to take-up and selectively convert the compound from an inactive state to an active toxic by-product by means of the intracellular target enzyme.

87. (New) A method of inhibiting the proliferation of a hyperproliferative cell that contains enzymes that are over expressed and which contribute to drug resistance, comprising:

(a) contacting the cell with the compound of claim 62; and

(b) allowing the cell to take-up and selectively convert the compound from an inactive state to an active toxic byproduct by means of the enzyme.